Health Status Indicators, Behaviors and Conditions by Rural-Urban Classification in Kansas Reviewed

Background

Mortality and life expectancy are higher among persons living in rural areas than in urban areas. Research shows that health disparities exist between residents living in rural versus urban counties [1, 2]. This is the first instance where the Kansas Behavioral Risk Factor Surveillance System (BRFSS) data are analyzed using the 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties [3]. KDHE previously used an urban-rural classification based on population density [4].

Methodology

Data from the 2018 Kansas BRFSS were analyzed to assess the prevalence of selected health status indicators, behaviors, and conditions by urban-rural categories. Descriptive analyses were conducted, prevalence estimates and 95% confidence intervals (CI) were calculated. All analyses were performed using SAS version 9.4 survey procedures to account for complex sample design and unequal selection probabilities. The 2013 NCHS Urban-Rural Classification Scheme for Counties uses 2010 census data and the February 2013 Office of Management and Budget designations of metropolitan statistical area (MSA), micropolitan statistical area, or noncore area to assign each U.S. county to one of six (four metropolitan, one micropolitan, and one noncore) following categories: 1) Large central metro counties; 2) Large fringe metro counties; 3) Medium metro counties; 4) Small metro counties; 5) Micropolitan counties; 6) Noncore counties.

Results

A significantly higher percentage of rural county adults reported fair or poor self-perceived health status as compared with urban adults (20.2% rural vs. 16.4% urban). Compared to urban county adults, rural county adults

had significantly higher prevalence of skin cancer (8.1% rural vs. 6.1% urban); any other type of cancer (9.1% rural vs. 6.7% urban); arthritis (31.7% rural vs. 24.6% urban); chronic obstructive pulmonary disease (COPD), emphysema or chronic bronchitis (9.5%

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rural vs. 6.3% urban); and diabetes (14.6% rural vs. 11.0% urban). Rural counties had a higher prevalence of adults who were obese (39.7% rural vs. 33.5% urban); overweight or obese (74.3% rural vs. 67.7% urban); currently using any smokeless tobacco products (10.3% rural vs. 5.0% urban); not participating in any physical activity other than the regular job in the past month (27.6% rural vs. 21.7% urban); who do not always wear a seatbelt when they drive or ride in a car (33.5% rural vs. 16.6% urban); and who did not get immunized against influenza during the past 12 months (68.0% rural vs. 63.3% urban) (Table 1).

Table 1: Prevalence of selected health status, behaviors, and conditions among adults aged ≥18 years, by urban-rural status* — Behavioral Risk Factor Surveillance System, Kansas, 2018			
Selected health status, behaviors, and conditions†	Overall	Urban	Rural
	% (95% CI)	% (95% CI)	% (95% CI)
Self-Perceived Fair or Poor Health Status	17.0 (16.1-17.9)	16.4 (15.4-17.4)	20.2 (18.1-22.4)
Skin Cancer	6.4 (6.0-6.9)	6.1 (5.7-6.6)	8.1 (6.8-9.3)
Any Other Type of Cancer	7.1 (6.6-7.6)	6.7 (6.2-7.3)	9.1 (7.8-10.4)
Arthritis	25.7 (24.7-26.6)	24.6 (23.6-25.7)	31.7 (29.3-34.1)
Chronic Obstructive Pulmonary Disease (COPD)	6.7 (6.2-7.3)	6.3 (5.7-6.8)	9.5 (8.0-11.1)
Diabetes	11.6 (10.9-12.2)	11.0 (10.3-11.8)	14.6 (12.8-16.4)
Obesity	34.4 (33.2-35.6)	33.5 (32.2-34.8)	39.7 (36.9-42.4)
Overweight Or Obesity	68.6 (67.5-69.8)	67.7 (66.3-69.0)	74.3 (71.8-76.9)
Current Smokeless Tobacco Products Use	5.8 (5.2-6.4)	5.0 (4.4-5.6)	10.3 (8.4-12.1)
Not Participating In Any Physical Activity Other Than The Regular Job In The Past Month	22.5 (21.5-23.5)	21.7 (20.6-22.7)	27.6 (25.1-30.2)
Does Not Always Use a Seatbelt	19.1 (18.1-20.0)	16.6 (15.5-17.6)	33.5 (30.9-36.1)
Not Getting Immunized Against Influenza During The Past 12 Months	64.0 (62.8-65.1)	63.3 (62.0-64.6)	68.0 (65.6-70.5)

Excludes unknowns and refusals.
Source: 2018 Kansas Behavioral Risk Factor Surveillance System, KDHE.

Table Notes - Continued

Notes: CI = confidence interval.

* As defined in the National Center for Health Statistics 2013 Urban-Rural Classification Scheme for Counties: 1) Large central metro counties in MSA of 1 million population that contain the entire population of the largest principal city of the MSA, or are completely contained within the largest principal city of the MSA, or contain at least 250,000 residents of any principal city in the MSA; 2) Large fringe metro counties in MSA of 1 million or more population that do not qualify as large central metro counties; 3) Medium metro counties in MSA of 250,000-999,999 population; 4) Small metro counties with MSAs of less than 250,000 population; 5) Micropolitan counties in micropolitan urban cluster population of 10,000-49,000; 6) Noncore counties not in micropolitan areas and might be thought of as rural or most rural. Researchers sometimes use noncore and rural or most rural interchangeably. We have used noncore as rural in this analysis. Noncore counties not in micropolitan areas are classified as rural or most rural, and all other

counties are classified as urban for this analysis. Rural or most rural counties in this analysis include: Allen, Anderson, Barber, Bourbon, Brown, Chase, Chautauqua, Cherokee, Cheyenne, Clark, Clay, Cloud, Coffey, Comanche, Decatur, Dickinson, Edwards, Elk, Ellsworth, Gove, Graham, Grant, Gray, Greeley, Greenwood, Hamilton, Harper, Haskell, Hodgeman, Jewell, Kiowa, Lane, Lincoln, Logan, Marion, Marshall, Meade, Mitchell, Morris, Morton, Nemaha, Neosho, Ness, Norton, Osborne, Pawnee, Phillips, Pratt, Rawlins, Republic, Rice, Rooks, Rush, Russell, Scott, Sheridan, Sherman, Smith, Stafford, Stanton, Stevens, Thomas, Trego, Wallace, Washington, Wichita, Wilson, Woodson.

[†] Respondents who reported that in general, their health was fair or poor. Skin cancer includes melanoma and non-melanoma skin cancer. Any other type of cancer excludes any type of skin cancer. Arthritis includes rheumatoid arthritis, gout, lupus, or fibromyalgia, some form of arthritis, excluding osteoporosis. Chronic Obstructive Pulmonary Disease includes COPD, Emphysema or Chronic Bronchitis. Diabetes excludes diabetes during pregnancy or prediabetes or borderline diabetes in adults. Obesity is defined as a body mass index of ≥30 kg/m^2. Overweight or Obesity is defined as a body mass index of ≥25 kg/m^2. Current smokeless tobacco product use is defined as currently using chewing tobacco, snuff, or snus every day or some days at the time of the survey. Any physical activities or exercises are exercises such as running, calisthenics, golfing, gardening, or walking for exercise. Does Not Always Use a Seatbelt were respondents who answered, "Nearly Always", "Sometimes", "Seldom", or "Never" to "How often do you use seat belts when you drive or ride in the car? Would you say – ". Not getting immunized is defined as not receiving a flu shot or flu vaccine that is sprayed through the nose or Fluzone intradermal vaccine.

Conclusion

These data findings provide the prevalence of health status, behaviors, and conditions related to disparities in rural and urban counties in Kansas. This population-based information indicates the need for evidence-based strategies to improve health-related behaviors and an ongoing need for awareness, education, and support, particularly in rural counties.

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References:

1. Centers for Disease Control and Prevention. Leading Causes of Death in Rural America. Available at: https://www.cdc.gov/ruralhealth/cause-of-death.html [accessed February 3, 2020].

2. Matthews KA, Croft JB, Liu Y, et al. Health-Related Behaviors by Urban-Rural County Classification — United States, 2013. MMWR Surveill Summ 2017;66(No. SS-5):1–8. http://dx.doi.org/10.15585/mmwr.ss6605a1 [accessed February 3, 2020].

3. Ingram DD, Franco SJ. 2013 NCHS urban-rural classification scheme for counties. Vital Health Stat 2 2014;166:1–73.

4. Kansas Department of Health and Environment. Annual Summary of Vital Statistics, 2018. Available at: http://www.kdheks.gov/phi/as/2018/2018_Annual_Summary.pdf [accessed February 3, 2020].

Secretary Norman's "2020: State of the Health of Kansas"

KDHE Secretary Lee Norman, MD, recently delivered "2020: The State of the Health of Kansans" to two Kansas Legislative committees. This is the first time KDHE has delivered such address to the Kansas Legislature.

Since 1990, Kansas has seen the greatest decline in its health rankings according to America's Health Rankings published December 6, 2019.

Among the findings:

- Behaviors - Kansas ranks #38 in the survey for obesity rates and #30 for smoking.
- Environment - Kansas ranks #21 in the U.S. for the number of children living in poverty. Kansas' chlamydia numbers are twice the healthiest state, at 465 per 100,000.
- Policy - Kansas ranks #49 in U.S. for females receiving the HPV vaccine and #34 for males. Kansas ranks #32 for children 19-35 months receiving completed vaccines at 69 percent. Kansas ranks 40th for the amount of dollars in public health funding at $60/person. This is 4.5 times less than the top state at $281/per person.
- Medical Care - There is low access to dentists, particularly in rural Kansas. Kansas ranks #38 with 50 dentists per 100,000. Kansas also ranks #35 for mental health providers.
- Outcomes - Kansas ranks in the bottom half on cancer, cardiovascular and diabetes deaths; frequent mental distress; infant mortality; and premature deaths in years lost before age 75.

"As the State Health Officer, it is my duty to look at the health of our state and provide education on what we as a state can do at an individual level, a community level and a government level," said Dr. Norman. "Health isn't just medical care. It's our behaviors, our environment, our policies and our outcomes."

The full presentation can be found at: http://www.kdheks.gov/media/download/The_State_of_the_Health_of_Kansans_01.21.2020.pdf

Updates & Announcements

ESSENCE Community of Practice

Kansas Syndromic Surveillance Program (KSSP), with the assistance of Wichita State University's Community Engagement Institute, is providing a "Community of Practice" (CoP), for users of the Syndromic Surveillance ESSENCE query portal. This program gives experienced users an opportunity to ask questions and discuss projects/experiences of importance which could be beneficial for other users. Each bi-monthly meeting will feature a presentation on at least one subject, current issue (coronavirus, vaping, etc.). It will also include a "how to" regarding a request from a previous CoP or a new system feature recently released or discovered.

The first CoP was held on February 5, 2020, with five users, all from different counties, in attendance. The presentation for this meeting was "Defining population of interest and the using the myFilter shortcut." Topics of coronavirus and suicide were also discussed as well as the use of sharing myESSENCE tabs amongst users.

The next ESSENCE Community of Practice meeting is scheduled for April 8, 2020 at 3 p.m., being a virtual meeting, no travel is required. If you are a user of ESSENCE and wish to be part of the CoP, please contact Danielle Ast (danielle.ast@wichita.edu) or Taylor Mitchell (taylor.mitchell@wichita.edu) for more information.

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Kansas Health Matters Module Updated

The Kansas Health Matters system that is available to all for review of public health indicators and many other resources, pertaining to public health, receives indicator updates on a quarterly basis as information is available. The following indicators were recently updated and are available for viewing.

- Acute Cerebrovascular (Stroke) Disease Hospital Admission Rate
- Asthma Hospital Admission Rate
- Chronic Obstructive Pulmonary Disease (COPD) Hospital Admission Rate
- Congestive Heart Failure Hospital Admission Rate
- Diabetes Hospital Admission Rate
- Heart Disease Hospital Admission Rate
- Injury Hospital Admission Rate
- Mental Behavior Hospital Admissions Rate

- Pneumonia (Bacterial) Hospital Admission Rate
- Poisoning (Drugs) Hospital Admission Rate

To view these and many other indicators at the State, Public Health Preparedness Region, and County levels, go to the Kansas Health Matters website http://www.kansashealthmatters.org/.

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Fast Stats: Syndromic Surveillance Data Protecting Kansas

Kansas Syndromic Surveillance Program (KSSP) participation has reached 89 hospital emergency departments (EDs) in Kansas, accounting for 88.7% of ED visits that occur in the state. This map shows counties with all Hospital EDs in production (blue), counties with most of their hospitals participating (orange), counties with hospitals working to get their data into production (green) and counties with either no hospital or no ED participating in syndromic surveillance. Data collected supports the efforts of epidemiologists and analysts at KDHE and local health departments to identify and mitigate the impact of injury and illness in Kansas.
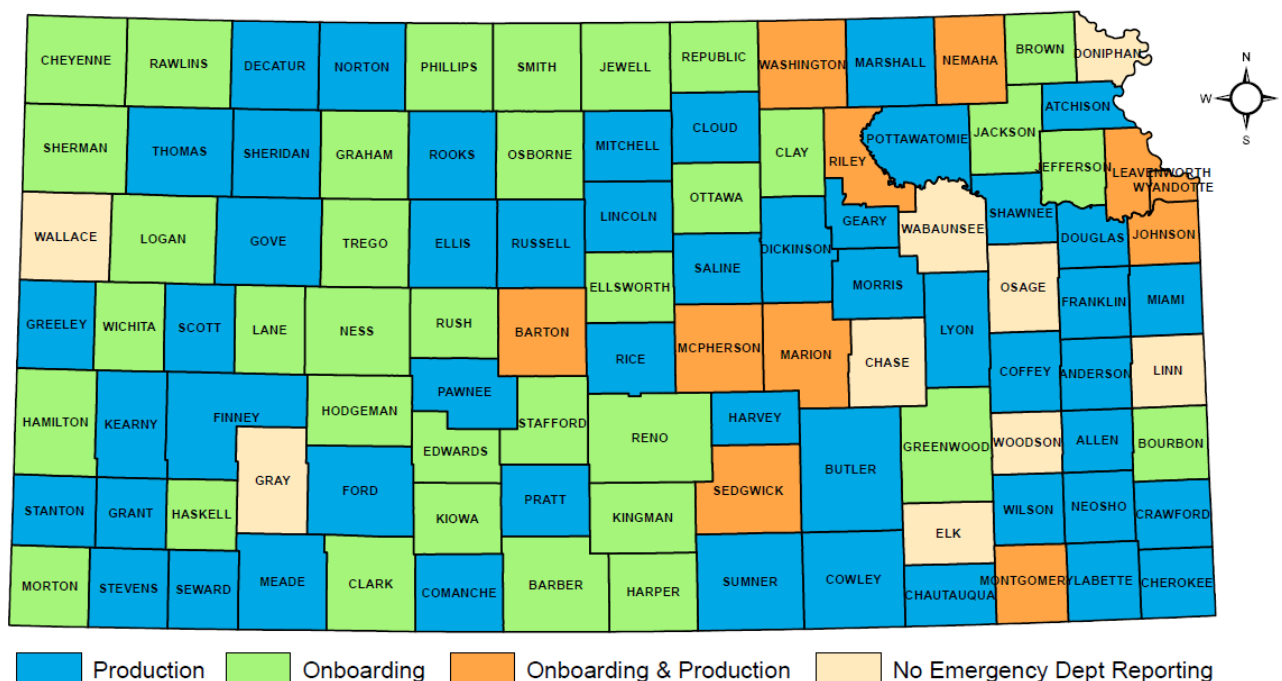
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2019 Novel Coronavirus Information

The Novel Coronavirus outbreak has been renamed COVID-19. This is an ongoing investigation and information is changing rapidly. For updated information on the outbreak, visit www.cdc.gov/coronavirus/2019-ncov/index.html.

To help you protect yourself, KDHE encourages you to:

- Recognize the symptoms of illness and understand how it is transmitted.
- Seek care if you have recently traveled within the affected region and are experiencing these symptoms (below).
- Always practice good hygiene, wash hands, cover coughs and sneezes and avoid sharing food, cups or utensils.
- Follow CDC Travel Guidance if you have or are planning to travel to China.

Census to Impact Kansas

The 2020 Census on April 1 will have a major impact on the state in ways greater than getting just a count of residents. The League of Kansas Municipalities reports it will have several impacts:

- Census numbers are used to distribute over $6 billion in federal funds to Kansas every year.
- Every uncounted person costs the state of Kansas approximately $2,082 in federal funding.
- If 1% of Kansas is under counted in the 2020 Census, the state of Kansas could miss receiving approximately $603,990,400 in federal funding over a 10-year period. It is critical that you count, your community counts, and Kansas Counts by participating in the 2020 Census.
- Census data is used to determine federal, state, and local voting districts.
- Businesses and government agencies consider population trends when choosing places to locate, which in turn boosts economic growth.
- As it's only a once-every-10-years process, it's crucial to get the count right or states that are undercounted will be shortchanged for a decade.
- Government, businesses and other stakeholders use census data for infrastructure and transportation planning; emergency preparedness, disaster relief, education funding, health tracking and disease control, and a multitude of other things.

More Information is available at https://kansascounts.org/.